

Residential Catalog

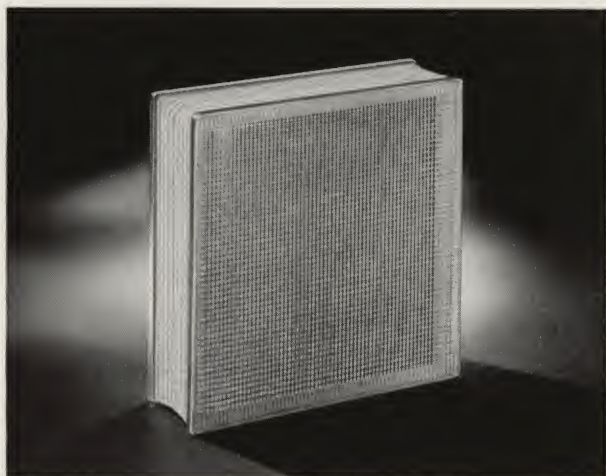
OWENS-ILLINOIS
GLASS BLOCK



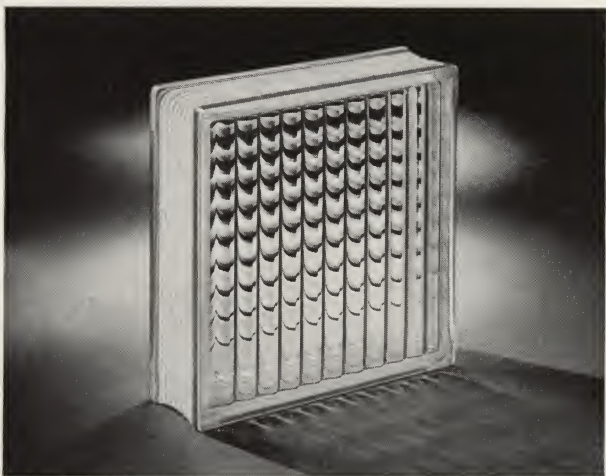
OWENS-ILLINOIS GLASS BLOCK



for vision

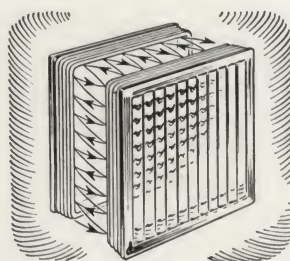


for privacy



for beauty

Owens-Illinois Glass Block is made of water-clear glass, formed in two halves which are permanently fused together at high temperatures to make a time-defying, all-glass unit. Dead air in the partially-evacuated block is dehydrated to eliminate condensation within the unit and to provide a truly effective barrier against heat transfer. Insulation value is high; against cold, it performs as well as an eight-inch brick wall. It conducts less than half the solar heat that ordinary windows do; insulation against noise is equal to a 4" plastered tile wall.



Made of two dish-shaped pieces permanently fused together

Owens-Illinois Glass Block is laid very much like ordinary brick, with standard masonry tools and mortar. It is not load-bearing, and panels require framed openings the same as windows. Glass Blocks, set in mortar, form permanent, weather-proof panels for both exterior and interior use.

Owens-Illinois Glass Blocks come in several different face designs and three sizes, nominally 6" x 6", 8" x 8" and 12" x 12". All are 3 $\frac{7}{8}$ " thick. Special shapes are available for building curved panels and for turning corners. Complete description and illustration on pages 12 and 13.

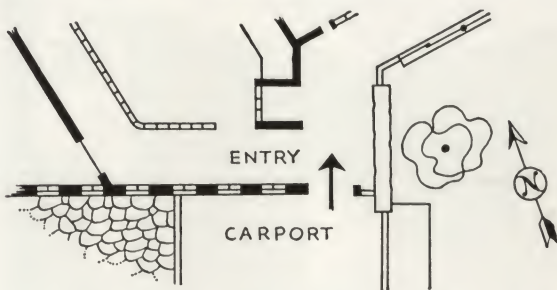
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**I GLASS
BLOCK**

Areas adjacent to entry-ways are ideally daylighted by glass block panels. Perfect privacy, when desired, can be obtained without resort to draperies or blinds. Because of glass block's high insulation, house plants do not freeze when placed near a panel. This is shown on front cover.



The photo above illustrates how well glass block blends with redwood and natural stone. At right, and in plan above, is shown an economical substitution of two eight-inch blocks for one concrete block, thus forming a pierced wall. In same photo note the twelve-inch blocks set next to the door to admit light to a sunken planter box.





There is no better way to bring a flood of daylight to the stairwell than a permanent, nearly-impossible-to-break panel of glass block. Loss of heat is negligible—about the same as through eight inches of solid brick.

The large picture above shows one of these tall, graceful stair panels smoothly inserted in fine masonry. The two small pictures show high horizontal panels, used to light a utility room and a garage. Each treatment is different yet both are attractive, one is trimmed with brick, the other with wood to show you how really versatile glass block is.

At right is a variation of the usual panel. Instead of mortar, twelve-inch blocks are simply slipped into a grill made of matching redwood.





At top of page is shown a pleasant little structure to make a "garden" out of an ordinary backyard. The glass block daylights the barbecue shelter, but cuts off an undesirable view and high Spring and Fall winds.

At top right is an all-purpose room for winter or summer living—either screens or plate glass can go in the openings. The floor band of glass block adds an extra touch of beauty, and because of its sturdiness, a large measure of practicality.

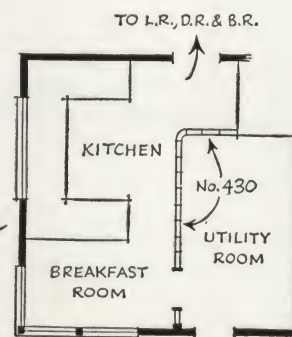
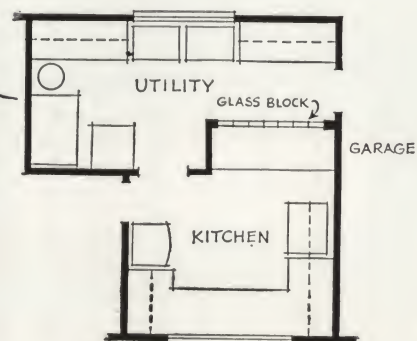
At left is a gracious dining area, very well daylighted, yet absolutely private.

**I GLASS
BLOCK**



These two pictures and their floor plans tell the story of borrowing daylight from one room to light another. Only glass block can do this in a truly effective manner. It lets light in but also retains privacy. Often the feeling of outside rooms is attained for otherwise dark spaces.

Another advantage is low sound transmission from room to room. A glass block panel is as soundproof as a 4" tile wall, plastered both sides. It is better at reducing noise transmission than most dry-wall interior construction.





I GLASS BLOCK

Any housewife wants plenty of daylight on all the work surfaces in her kitchen. The best way to give her this is with glass block. She'll like both the cheerful daylight and the easy practicality of a material that cleans with a mere wipe of a damp cloth.

Photos on this page show strip panels over work surfaces, a clerestory arrangement over cabinets, and a large floor-to-ceiling panel.

One of the nice things about a kitchen glass block panel is that it doesn't "sweat" in cold weather—because of its superior insulation qualities.





I GLASS BLOCK

The wing portion of the house just above was once a garage. The new owner has converted it into a needed bedroom by filling the old garage door opening with a glass block panel. The small ventilator set in the panel, together with the existing window, furnishes excellent ventilation.

Below is a California bedroom, interior and exterior. The casements allow a sweep of the wind through the house and the block wall allows milady to put on her make-up by daylight in complete privacy.





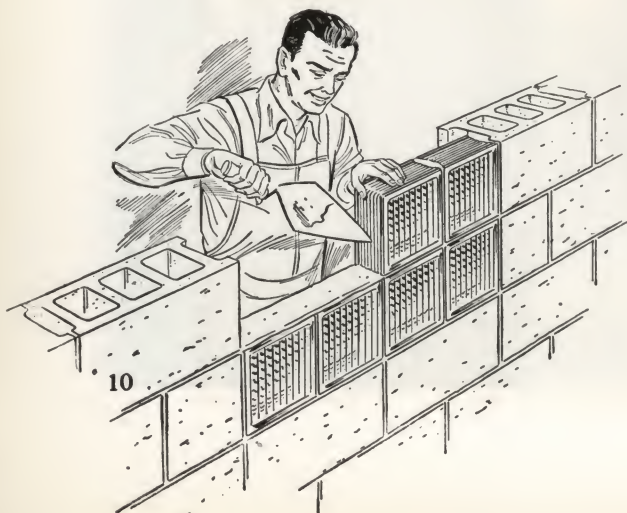
Owens-Illinois Glass Block makes an impervious, waterproof, masonry wall that transmits daylight freely. Use it any place in the bath or lavatory—for showers, over-the-tub, or for bringing light from the outside.

Cleaning it is no work at all, and you have all the privacy you want without those hard-to-keep-clean Venetian blinds. Where ventilation is required through the panel, small windows can be set-in, or "Panel-Vents", shown on page 14, may be used.





The glass block basement "window" came into being when contractors found it extremely economical to lay two eight-inch glass blocks along with one sixteen-inch cinder or concrete block. This discovery not only paid off in economy of installation but ended the nuisance of replacing rusted steel or rotted wood windows because glass blocks are *permanent*!



Look at the interior and exterior of the house on this page and note that the "below-ground" feeling so often associated with a basement room is not present in this snug recreation room. Besides the fine feeling of "light" added there are real economies in upkeep. No painting, and almost never any breakage.

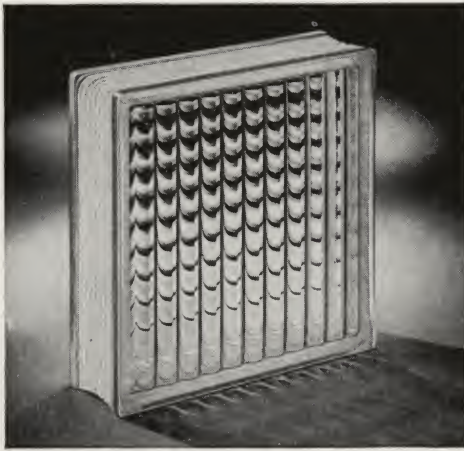
I GLASS BLOCK

All three pictures on this page are of the same garage. The two interiors represent "before" and "after" glass block. For real neatness and efficient space utilization, the choice is obvious.

Block panels in the garage pay other dividends to owners. When the doors are closed, prowlers cannot tell whether the car is in or out. Second, the panels are hard to break and the inevitable baseballs just bounce off.

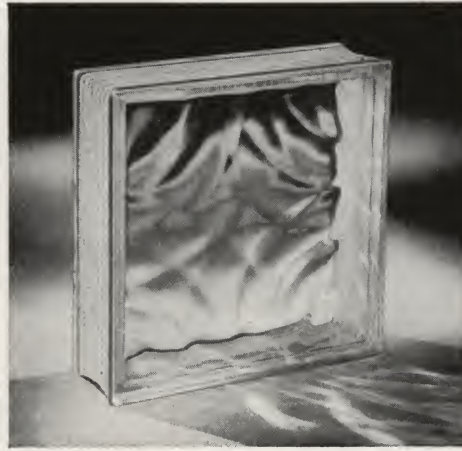
Since the modern garage is more often than not a part of the house, a glass block panel adds to appearance. You won't have to add curtains to make it "go" with the rest of the house.





design no. **16**

A smooth-faced design with convex ribs on both interior faces. The rib arrays are perpendicular to each other and the rib widths are scaled to block size. High light transmission with a "sparkle" that makes basement rooms seem lighter.



design no. **30**

Smooth-faced with repetitive concentric circle design on both interior faces. Design is scaled to block size. Face design de-emphasizes mortar joint pattern. Special positioning of block with respect to design not necessary when installing. High light transmission.



design no. **31**

A smooth-faced glass block with slightly uneven configurations on both interior faces. Configurations vary to avoid repetition. The random design gives the appearance of early Colonial hand-made glass. High light transmission, with a small degree of privacy.

Sizes and weights of **I** GLASS BLOCK

Specify these numbers Design numbers	SQUARE BLOCKS			CORNERS		RADIALS	DEGREE OF PRIVACY	SMOOTH FACE	RIBBED FACE
	NOMINAL 6"	NOMINAL 8"	NOMINAL 12"	NOMINAL 6"	NOMINAL 8"	NOMINAL 8"			
16	216	316	416	216-C	316-C	316-R	Fair	•	
30	230	330	430	230-C	330-C		Fair	•	
31		331	431				Very Limited	•	
40	240	340	440	240-C	340-C	340-R	Good		•
65		365	465		365-C	365-R	Complete		•
70		370				370-R	None	•	
Number/Cartron	12	8	4	12	8	8	To match corner blocks, lay square blocks with face designs vertical on building outside.		
Lbs. Per Cartron	43	55-58	63	49½	44½	58			



design no. **40**

Very flat ribs on exterior faces. More pronounced ribs on interior faces; interior faces are lightly etched for diffusion. All ribs are parallel. Install with ribs vertical, horizontal, or alternating for basket-weave effect. High light transmission.



design no. **65**

This is a diffusing design, with prisms on the inside and ribs in the outside faces. It has two uses: For complete privacy, and for use on sun exposures. It must be installed "Top-Inside" as marked. It has a special finish to which mortar and dirt do not adhere.



design no. **70**

Smooth-faced clear design affording vision. Gives an interesting louvre or egg-crate effect when used in large panels or interior partitions. Often inserted in glass block panels employing other design types when vision necessary. High light transmission.

How to select designs

Owens-Illinois glass block are manufactured in the six face designs pictured above. The table to the left indicates which of these are available in square blocks, corners or radials, and also ranges of size for each design. Each of these O-I face designs has been created for a specific function, and care should be taken to select the proper design for maximum performance with respect to light transmission, translucency and transparency.

Orientation (sun or non-sun exposures) and type of room occupancy or usage are the two basic factors in selection of the proper face design. Bathrooms and dressing rooms need absolute privacy, so the diffusing characteristics of the No. 65 design, which offers complete privacy and absence of silhouettes

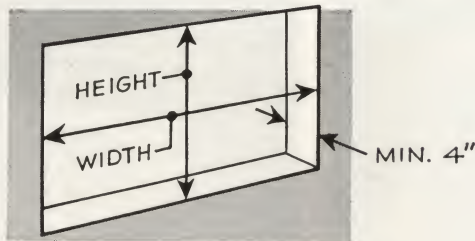


should be used. The No. 65 should also be considered for use on the south and west to reduce sun glare—other designs used on sun exposures may require shading or draping as do ordinary windows. The No. 70 is trans-

parent, so use it in the form of a window or as a floor-to-ceiling "transparent wall" where planning calls for a view of the exterior. Although No. 30 and No. 31 are practically transparent, slight configurations in their faces produce some distortion and break-up images into interesting "patterns". The No. 16 and the No. 40 offer a good degree of translucency with reasonably good privacy although figures close to panels will form a silhouette. For dramatic night lighting effects, the No. 16 will sparkle brilliantly and the No. 65 will glow softly.

Whether you plan to build or remodel—consult your architect. He is familiar with glass block and will advise you where to use it and what design to select.

Dimension table



For 1/4" mortar joints

To find opening dimensions, height or width, use table below and add:

- 1 *Simplified Method* { Height: Table + 1/4" + deflection
Width: Table + 1/4"
- 2 *Standard Method* { Height: Table + 3/8" + deflection
Width: Table + 1/2"

No. of Units	5 3/4" x 5 3/4"	7 3/4" x 7 3/4"	11 3/4" x 11 3/4"
1	6"	8"	1'-0"
2	1'-0"	1'-4"	2'-0"
3	1'-6"	2'-0"	3'-0"
4	2'-0"	2'-8"	4'-0"
5	2'-6"	3'-4"	5'-0"
6	3'-0"	4'-0"	6'-0"
7	3'-6"	4'-8"	7'-0"
8	4'-0"	5'-4"	8'-0"
9	4'-6"	6'-0"	9'-0"
10	5'-0"	6'-8"	10'-0"
11	5'-6"	7'-4"	11'-0"
12	6'-0"	8'-0"	12'-0"
13	6'-6"	8'-8"	13'-0"
14	7'-0"	9'-4"	14'-0"
15	7'-6"	10'-0"	15'-0"
16	8'-0"	10'-8"	16'-0"
17	8'-6"	11'-4"	17'-0"
18	9'-0"	12'-0"	18'-0"
19	9'-6"	12'-8"	19'-0"
20	10'-0"	13'-4"	20'-0"
21	10'-6"	14'-0"	21'-0"
22	11'-0"	14'-8"	22'-0"
23	11'-6"	15'-4"	23'-0"
24	12'-0"	16'-0"	24'-0"
25	12'-6"	16'-8"	25'-0"
26	13'-0"	17'-4"	26'-0"
27	13'-6"	18'-0"	27'-0"
28	14'-0"	18'-8"	28'-0"
29	14'-6"	19'-4"	29'-0"
30	15'-0"	20'-0"	30'-0"
31	15'-6"	20'-8"	31'-0"
32	16'-0"	21'-4"	32'-0"
33	16'-6"	22'-0"	33'-0"
34	17'-0"	22'-8"	34'-0"

Weight of O-I Glass Blocks laid up in panels is approx. 20 lbs. per square foot.

Installation

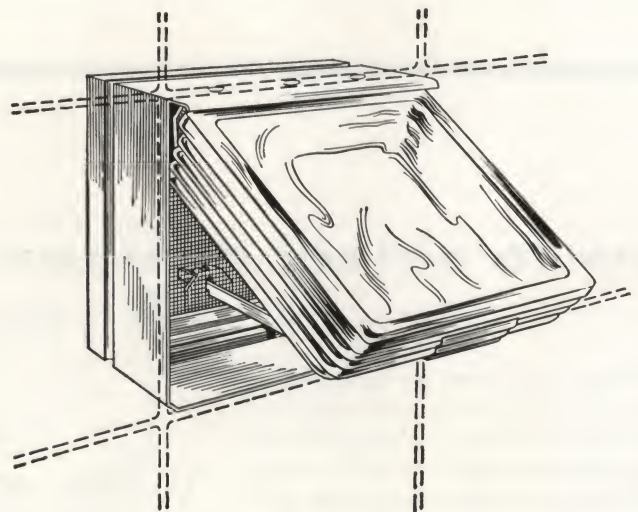
There are two basic constructions for installing Owens-Illinois glass block: (1) The *simplified method* which applies to panels up to 25 sq. ft. in area with a maximum lineal dimension of 7'0" vertically or horizontally. (2) The *standard method* which applies to panels up to 144 sq. ft. in area with a maximum lineal dimension of 10'0".

1 The *Simplified Method* is illustrated in the step-by-step sequence on the opposite page. In addition to glass block and mortar, only a small can of asphalt emulsion and a caulking gun are required for installation. This method will apply to most glass block panels in the average home.

2 The *Standard Method* for installation of large panels differs from the Simplified in that (a) expansion joints must be provided at jambs and heads, (b) panels must be reinforced, and (c) panels must be securely anchored in place.

Additional accessories for this method include (a) 3/8" x 4 1/8" O-I expansion strips for installation at jambs and heads, (b) O-I wall ties for installation in horizontal mortar joints every two feet in height, and (c) O-I panel anchors for anchoring the panels in place. These anchors are not necessary if the panels are set in a channel or recess at jambs.

A post card to Owens-Illinois will bring you complete drawings and specifications for standard installation procedures.



PANEL-VENT. Natural ventilation through glass block panels may be accomplished by installation of an O-I Panel-Vent. This product is actually a glass block that opens. Matching any of the six O-I glass block face designs, the Panel-Vent is installed in the same manner as a glass block at the time the panel is erected. A single operating handle projects the glass face outward as shown and an integral aluminum screen keeps out insects. When locked shut, a Panel-Vent is weather tight. Space Panel-Vents for required ventilation. Available in 8" x 8" size only.

Step-by-step installation

**I GLASS
BLOCK**

1



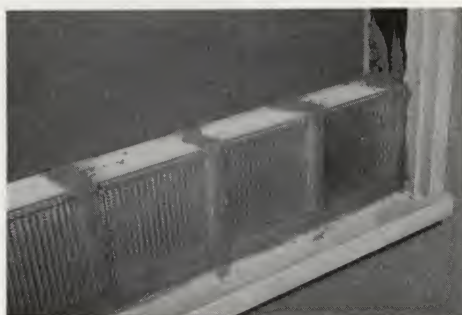
PREPARE OPENING. *First*, check size of opening against table at left. Be sure to allow $\frac{1}{4}$ " space for expansion at head. *Second*, lay out each mortar joint for size of block selected, varying joints from $\frac{3}{16}$ " to $\frac{3}{8}$ " to fit opening. *Third*, trowel a heavy coat ($\frac{1}{16}$ " thick x 4" wide) of asphalt emulsion on sill and both jambs. This emulsion permits panel expansion and serves as bond breaker.

2



MORTAR. Apply mortar bed to the sill. Use either prepared mortar or a mix of 1 part cement, 1 part high calcium hydrated lime and 4 parts fine sand, by volume. Keep mixture stiff. Do not add too much water or allow the mix to become slushy. The drier the mix, the better the eventual job. Check each glass block with a spirit level to see that it is both level and plumb.

3



LAYING BLOCKS. *First*, after mortar is applied to sill, apply mortar to one edge of a block and shove in place in a corner. *Second*, repeat for the opposite corner. *Third*, still coating one vertical edge with mortar, work from both sides to center. *Fourth*, install center glass block, coating two opposite edges with mortar. You may have to "push" mortar down in the last joint.

4



REPEAT process as each row of blocks is installed. Be sure that mortar joints are full. If joints are not filled completely, "voids" will occur, and this may cause leakage later on. Mortar should completely cover edges of each block and be $\frac{1}{8}$ " thicker than predetermined mortar joint thickness. Additional thickness is so mortar will squeeze into corrugated edges and make a stronger panel.

5



CENTER GLASS BLOCK in the top course goes in last. Coat both vertical edges with mortar and shove in from either side. If any of the mortar falls out, repack with a small stick or metal jointing tool. *Do not put mortar on top of last row of blocks.* Leave this $\frac{1}{4}$ " space open for expansion, and fill it with caulking to seal against the weather. This is shown in the next step.

6



CLEANING AND CAULKING. *First*, remove excess mortar from faces. *Second*, after mortar hardens slightly, "strike" joints with a rounded jointing tool to make smooth concave joint. *Third*, caulk expansion space at head with caulking gun or with glazing mastic and putty knife. *Fourth*, clean both interior and exterior surfaces of panel, using a stiff brush and damp cloth. Do not disturb mortar joints.



OWENS-ILLINOIS GLASS BLOCK
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